

ABSTRACT

A system (100) and method for polishing and planarizing a substrate (105) is provided that reduces non-uniformities in the removal of material from the edge of the substrate due to a rebound effect. In one embodiment system (100) includes a polishing head (140) having a carrier (155), a subcarrier (160) carried by the carrier and adapted to hold the substrate during a polishing operation, and a retaining ring (170) having an inner edge (220) disposed about the subcarrier. A lower surface (210) of the retaining ring (170) is in contact with a polishing surface (125) during the polishing operation, and has at least one annular recess (215) formed therein to enable the polishing surface compressed under the retaining ring to rebound into the annular recess, thereby reducing the rebound effect and inhibiting non-planar polishing of the surface of the substrate (105).